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FACTS



Ministry
of the
Environment

Ontario

Hon. George A. Kerr, Q.C.,
Minister

Everett Biggs,
Deputy Minister

about pesticides

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BIRCH LEAF MINER (Fenusa Pusilla)

Full-grown larvae are somewhat flattened, yellowish-white in appearance, and about $\frac{1}{4}$ inch (6mm) long. Black spots occur on the lower surface of the thorax and the first abdominal segment. Winter is spent as full-grown larvae in small cells 1 or 2 inches below the soil surface. Pupation occurs in the spring and the adults begin to appear in the latter part of May. They lay their eggs into new leaves at the tips of birch twigs. Larvae feed as miners eating the centre tissue of the leaf. Full-grown larvae chew their way out of the leaf and drop to and enter the ground where they form cells in which they pupate. They leave hollowed-out brown areas in the leaf, these areas wrinkle and turn brown.

There are two or more generations of the birch leaf miner a year depending on the length of the growing season. All birches may be attacked but black, yellow, river birch are less susceptible to injury. Moderate infestations do no appreciable damage to the tree but the leaf blotches affect the general appearance.

CONTROL

As the larva is entirely enclosed between the upper and lower surfaces of the leaf, it cannot be killed by contact insecticides because they cannot penetrate the leaf surfaces. Spraying with such insecticides has to be timed with the laying of the eggs.

Use any of the materials listed in Mid and again in late June. A systemic

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insecticide (one that enters the sap stream of the tree) i.e. Cygon (dimethoate) or Meta-Systox - R may be used after mines appear.

Cygon 2E may be used as a foliage spray or a "brush-on" treatment, it can be painted on a smooth area of the bark around the trunk below the branches, in a band 6 to 8 inches wide. Do not use on newly planted trees.

	<u>100 gallons of water</u>	<u>1 gallon of water</u>
*Di-Syston 15% granules (see label)	1½ lb.	1½ tablespoons
*Sevin 85% W.P.	2 lb.	2 tablespoons
Sevin 50% W.P.	1 quart	2 teaspoons
Malathion 50% E.C.	1½ pint	1½ teaspoons
*Meta-Systox - R 25% E.C.	½ pint	½ teaspoon
*Cygon 4E or Rogor 40 Foliar Spray	½ pint	½ teaspoon
Cygon 2E	1 pint	1 teaspoon

*Available to licenced exterminators only.

All of the above chemical recommendations have been endorsed by the Ontario Pesticide Advisory Committee in "1975-76 Production Recommendations for Ornamentals and Turf" Ontario Ministry of Agriculture and Food Publication #383.

REFERENCE

Insects and Mites of Ornamental Trees and Shrubs
O.M.A.F. Publication # 93

Eastern Forest Insects
W. L. Baker
U.S. Dept. of Agriculture Forest Service
Publication # 1175